



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,392	11/17/2003	Johannes Straver	4590-232	2059

33308 7590 02/08/2006

LOWE HAUPTMAN GILMAN & BERNER, LLP  
1700 DIAGNOSTIC ROAD, SUITE 300  
ALEXANDRIA, VA 22314

EXAMINER

PARSONS, THOMAS H

ART UNIT PAPER NUMBER

1745

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/714,392	<b>Applicant(s)</b> STRAVER, JOHANNES	
	<b>Examiner</b> Thomas H. Parsons	<b>Art Unit</b> 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____                                                             | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the instant application should be amended, as appropriate, to a single paragraph within the range of 50 to 150 words, and "said" should be deleted from the last paragraph.

2. The disclosure is objected to because of the following informalities:

Page 4, line 2, suggest changing "thionylchloryde" to --thionylchloride--;

Page 4, line 14, suggest changing "ampoule 22" to --ampoule 21--; and "liquid 21" to --liquid 22--;

page 5, line 7, the text "At he ampoule highest..." appears awkwardly worded; and,

page 7, line 21, suggest changing "stocks" to --shocks--.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1745

4. Claims 7 and 15-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Claim 7:** It is unclear as to what is meant by “predetermined formed” as recited in line 2 of the claim.

**Claim 15-18:** It is unclear as to what is meant by the recitation “acceleration is greater equal to” in line 2 of each claim.

5. Claims 19-21 provide for the use of a specific reserve battery, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

#### ***Claim Objections***

6. Claims 1, 20 and 21 is objected to because of the following informalities:

Line 5, suggest changing “the said” to --said--;

Line 8, suggest changing “this said” to --said--;

Claims 20 and 21, suggest changing “n a projectile” to --in a projectile--.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 1745

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 2, 9-12, and 18-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Troedsson et al. (4,196,264).

**Claim 1:** Troedsson et al. in Figures 1 and 2 discloses a reserve battery comprising:

a cell stack of electrodes (14, 15);

a liquid reserve ampoule including the electrolyte (10);

an activating system (12);

a housing (13) in which the cell-stack, ampoule and activating system are placed; and

wherein the cell-stack of electrodes has an annular shape, and wherein the ampoule is placed at the centre of the annular cell-stack, and wherein the activating system breaks (via 20) the ampoule at a predetermined acceleration (col. 2: 35-col. 3:25).

**Claim 2:** Troedsson et al. disclose that the activating system comprises a means (12) to protect the ampoule from vibrations and shocks (col. 2: 20-21).

**Claims 9 and 11:** Troedsson et al. in Figure 1 disclose an activating system comprising a support (17) over which the ampoule (10) is stood up, edges linked only to the support by breaking means (col. 2: 68-col. 3: 5).

**Claims 10 and 12:** Troedsson et al. disclose a vibration and shocks protection means made of a flexible material. In particular, Troedsson et al. on col. 2: 10-21 disclose "...the large bearing surface between the plane ampule bottom surface and the plane support plate will result in and [sic] being supported in a very shock-proof manner..." which has been construed as anticipating a flexible material.

Art Unit: 1745

**Claim 18:** Troedsson et al. disclose that the predetermined acceleration is greater than or equal to the acceleration of a projectile fuze during transport or loading (abstract, col. 1: 15-25, and col. 3: 10-25).

**Claims 19-21:** Troedsson et al. disclose a reserve battery for use in a projectile fuze (abstract).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 3, 5, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Troedsson et al. as applied to claim 1 above, and further in view of Snyder (4,699,854).

**Claims 3 and 5:** Troedsson et al. are as applied, argued, and disclosed above, and incorporated herein.

Troedsson et al. do not disclose an activating system comprising a weight glued on the top of the ampoule and/or a hanging device to which the ampoule is hung with means to release the ampoule at the said predetermined acceleration.

Snyder in the lone Figure discloses an activating system comprising a weight (18) placed on the top of the ampoule (10) (col. 1: 63-col. 2: 51).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the activating system of Troedsson et al. by incorporating

Art Unit: 1745

the weights of Snyder because Snyder teaches an activating system comprising weights that would have provided a means to activate the battery with or without spin or setback thereby providing a less expensive and simpler battery.

Snyder does not disclose that the weight is glued to the ampoule. However, it would have been an obvious matter of choice to one with ordinary skill in the art at the time the invention was made to have modified the ampoule by glueing the weight thereto, since the Applicant has not disclosed that this particular contact provides any criticality and /or unexpected results and it appears that the invention would perform equally well with any contact such as the placement of the weight on the ampoule as taught by Snyder.

**Claims 15 and 16:** Troedsson et al. disclose that the predetermined acceleration is greater than or equal to the acceleration of a projectile fuze during transport or loading (abstract, col. 1: 15-25, and col. 3: 10-25).

11. Claims 4, 6, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Troedsson et al. as applied to claim 1 above, and further in view of Snyder as applied to claim 3 above, and further in view of Rudenauer et al. (6,673,486).

**Claims 4 and 6:** Troedsson et al. and Snyder are as applied, argued, and disclosed above, and incorporated herein.

The Troedsson et al. combination does not disclose an activating system comprising a hanging device to which the ampoule is hung with means to release the ampoule at the a predetermined acceleration, wherein the hanging device comprises a vibration and shocks protection means.

Art Unit: 1745

Rudenauer et al. in Figure 1 disclose an activating system (26) comprising a hanging device (28) to which the ampoule (24) is hung with means (30) to release the ampoule at the a predetermined acceleration, wherein the hanging device comprises a vibration and shocks protection means (30) (col. 3: 15-col. 5: 21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the activating system of the Troedsson et al. combination by incorporating the hanging device of Rudenauer et al. because Rudenauer et al. teach an activating system that would have provided an activatable battery with reliable free-fall safety thereby improving the overall performance of the battery.

**Claim 17:** Troedsson et al. disclose that the predetermined acceleration is greater than or equal to the acceleration of a projectile fuze during transport or loading (abstract, col. 1: 15-25, and col. 3: 10-25).

12. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Troedsson et al. as applied to claims 1 and 2 above, and further in view of Rudenauer et al.

**Claim 7:** Troedsson et al. are as applied, argued, and disclosed above, and incorporated herein.

Troedsson et al. do not disclose a plate with a predetermined form, some edges of this form retaining the hanging device in the top of battery housing.

Rudenauer et al. disclose a hanging device (30) in the form of a plate wherein some edges of this form (i.e. cylindrical sleeve 34) retain the hanging device in the top of battery housing (12) (col. 1: 14-40).



Art Unit: 1745

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the activating system of the Troedsson et al. combination by incorporating the hanging device of Rudenauer et al. because Rudenauer et al. teach an activating system that would have provided an activatable battery with reliable free-fall safety thereby improving the overall performance of the battery.

**Claim 8:** The rejection is as set forth above in claim 7 wherein further Rudenauer et al. disclose in Figure 1 the hanging device is enough big for pushing the edges against the housing (i.e. a cylindrical sleeve is fitted into a support sleeve which is supported on the battery cell 20) (col. 1: 14-40) and small enough small for releasing the hanging device from the housing at the said predetermined acceleration (col. 4: 12-56).

13. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Troedsson et al. as applied to claim 1 above, and further in view of Babai et al. (4,499,160).

**Claim 13:** Troedsson et al. are as applied, argued, and disclosed above, and incorporated herein.

Troedsson et al. do not disclose an electrolyte liquid contained by the ampoule comprising thionylchloride and bromine.

Babai et al. disclose in Figure 1 an electrolyte liquid (14) contained by the ampoule (11) comprising thionylchloride and bromine (col. 4: 12-29).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the electrolyte of Troedsson et al. by substituting the electrolyte with the electrolyte of Babai et al. because Babai et al. teach an electrolyte that would

Art Unit: 1745

contributed to a battery having a fast activation and a high current drain thereby improving the overall performance and efficiency of the battery.

**Claim 14:** The rejection is as set forth above in claim 13 wherein Babai et al. disclose a reserve battery comprises an annular grid (col. 3: 9-12) on a plate over which a mixed powder comprising carbon and tetrafluoroethylene is put (col. 2: 36-45) , a glass fiber foil layer (col. 4: 1-6) and a layer comprising lithium (i.e. lithium anode) (col. 3: 47). See also col. 2: 22-45, col. 3: 9-col. 4: 11).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas H. Parsons whose telephone number is (571) 272-1290. The examiner can normally be reached on M-F (7:00-4:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**PATRICK JOSEPH RYAN**  
PATENT EXAMINER

Thomas H Parsons  
Examiner  
Art Unit 1745